

REMARKS

Claims 2-4 are being cancelled. Claims 5 and 6 are being added. Claim 1 is being amended. Upon entry of this amendment claims 1 and 5-6 will be pending in the application.

Claim 5 is supported by the specification at, for example, page 5, lines 4-12. Claim 6 is supported by the specification at, for example, page 3, lines 6-7.

The rejection of claims 1-4 under 35 U.S.C. §102(b).

Claims 1-4 were rejected under 35 U.S.C. §102(b) as having each and every feature and relationship anticipated by U.S. Patent No. 4,360,905 to Hackett.

As explained by the inventor, in the present invention, the alarm control panel (alarm controller) is connected to a remote keypad (remote input/output device) by a single cable having just two conductors. The signal processor at the controller monitors voltage and current fluctuations between several levels. In terms of voltage, there is a normal level, a data transmission level below the normal level, and an alarm history record level below the data transmission level. In terms of current, there is a maximum level, a data transmission level below the maximum and a low level below the data transmission level. There is two-way communication along the cable between the alarm control panel and the remote keypad.

At the remote keypad side of the present system, if one shorts the two-way cable a high current will be detected at the main control unit. The medium current level is used for general data transmission – say transmission of a PIN from the remote keypad, and the low current level occurs if one cuts the two-wire cable. This will trigger a tamper alarm.

At the alarm controller or main control panel side, at the general data transmission voltage level, the control panel can sense a beep tone, entry tone, exit tone, system fault tone, etc., to the remote keypad via the two-conductor cable. If intrusion has occurred, the main control panel will send a low voltage to the remote keypad to illuminate an alarm light at the remote keypad.

As further explained by the inventor, in the Hackett reference, there is no provision for two way communication in a single two conductor cable. Any extra signals, other than the alarm signal, need to be sent back to the control unit 10 from the remote processor 14 with an extra independent cable. Figure 1 shows that tamper signals, for example, are sent back by additional cable Loops 1 & 2. That is, each pair of conductors provide one-way communication of one type only.

Figure 2 of the Hackett reference at the bottom left shows a pair of loops (1 and 2) connected to tamper circuit 250. The direction arrows on each loop indicate one way communication only. Column 9, which refers to this drawing, indicates that the two tamper loops may be connected to the remote processor 14 to provide an indication of whether the interconnecting cabling has been tampered with. These loops, in response to a signal on either loop, indicate that the alarm system wiring has been interrupted. These are additional and distinct loops whereas the presently claimed device does everything with a single two conductor cable.

Figure 11 and column 24 of the Hackett reference indicates that the Hackett invention allows all of the signals for the described operation to be transmitted between the remote control 48 and controller unit 10 over a single two conductor cable 49. This disclosure refers to a manual switched operation as described in column 23 upon manual activation of switch 108. The inventor asserts that this is not two way communication.

Claims 1 and 5-6 are not anticipated by the Hackett reference and are patentable for at least these reasons.

The Farrell et al and Shaw et al references.

Applicant notes that the claims have not been rejected over the Farrell and/or Shaw references.

In Farrell et al a photo light sensor is connected with a two-way cable to measure the light intensity which is controlled by the vane position of a sprinkler system. The change of light intensively causes a change of voltage or current at an end of the two-

Appl. No.: 10/748,575

Response to Office communication dated: 05/26/2005

Attorney Docket: MCHK/146/US

way cable connected to a sprinkler system. There is only one category of data conducted by the two conductors in one direction only.

Shaw et al discloses an environmental protection system to detect remote sensors of the same family type by observing their return voltage/current amplitudes at the main control unit. The control panel cannot send any signal to control the individual sensors using the same two-conductor cable. This is why they disclose a necessity to turn off the power supply to reset the system to its original status.

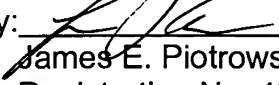
In sum, all of the cited references appear to show only one-way communication along a two-conductor cable.

In summary, Applicants have addressed each of the objections and rejections within the present Office Action. It is believed the application now stands in condition for allowance, and prompt favorable action thereon is respectfully solicited.

Respectfully submitted,

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